Statistical evidence everywhere goes to show the wide prevalence of these diseased conditions of tonsils and adenoids in our children and proves equally well the beneficent influence of proper surgical intervention on the organisms and general health of such children. To advocate a wait to see if the tonsils will atrophy spontaneously, is to advocate a procedure not warranted by our present knowledge.

Think for a moment, of the large number of human beings who as children had adenoids and diseased tonsils and which were neglected, so that the physical and mental development were so seriously retarded that these individuals, in consequence thereof, and the deafness so often associated therewith, were relegated to lower places on the social and economic ladders than would have been the case had they received proper operative treatment!

Surely the crosses which this host of fellow beings unnecessarily are made to bear, leaving out of account all other reasons, should be sufficient to make us look upon properly indicated adenectomies and tonsillectomies as of the highest economic and social significance and worthy of the broad exploitation these subjects are now receiving. And in this work of education we feel sure that our colleagues of the dental profession will be more than willing to do their part.

OPERATIVE TREATMENT FOR TIC DOULOUREAUX OF THE INFERIOR DENTAL NERVE.*

By CHARLES G. LEVISON, M. D., San Francisco.

I desire to state that in this paper there is no intention to discuss the relative merits of the different forms of treatment for inveterate neuralgia of the inferior dental nerve, for it is accepted that certain methods of treatment such as injections of alcohol, etc., are sufficiently effective as palliative measures to satisfy the patient, even if their results are not permanent.

The patients here considered are those who have been subjected with more or less indifferent success to all of the accepted methods of treatment, and who in despair apply for relief; it is in this class that surgical intervention should be resorted to.

Resection of the inferior dental nerve is not difficult when carried out according to the methods generally advocated, but the end results are not satisfactory. As far as the simplicity of the operation is concerned this is quite true, but under ordinary circumstances the operation is incomplete, so that after a year has elapsed there is often a recurrence of the pain and as the patient does not return, it is assumed that a cure has been accomplished, when as a matter of fact this is not the case. With the resection of this nerve as it is usually carried out, recurrences are almost as frequent as after alcohol injections.

The points that I desire to emphasize have no claim to originality but consist of a few procedures that make the operation complete so that a permanent cure can be effected.

The operation has for its object the complete removal of the entire inferior dental nerve, including its extreme ramifications which have their endings in the mucosa of the lip. The incisor branch, which is a continuation of the dental nerve beyond the foramen and which goes to the incisor teeth, should also be removed from its canal. When the nerve is removed in its entirety, if it is the only one involved, a permanent cure is effected.

The usual methods advocate the removal of the inferior dental nerve in its canal, laying no particular stress upon the removal of the incisor branch or the filaments that go to the lower lip and its neighboring tissues.

I believe, and my experience has borne this out, that even if the entire inferior dental nerve in its canal is removed, and if the branches as they pass into the tissues are not withdrawn, a permanent cure does not always result, for in one instance the entire inferior dental nerve was removed from its origin to the mental foramen and the pain was not relieved until the filaments going to the tissues of the lip were avulsed.

Operation: The following method has been developed after numerous experiences, and while it may be slightly more difficult than those generally advocated, in my opinion it has been followed by more satisfactory results.

A small incision is made through the mucosa between the two bicuspid teeth at their roots, which readily uncovers the mental foramen together with its nerves and vessels; the stump of the nerve is grasped with a firm hemostat, when the nerve together with all of its ramifications, which are numerous, are avulsed from the tissues of the lip; this avulsion is easily done by pushing the tissues away from the nerves, which are quite large and very strong and can be firmly held by the hemostat.

These nerve endings are remarkably large and their size will surprise one who has never removed them in this way. They extend deep into the tissues of the lower lip as far as the vermillion mucosa. The nerve can generally be extracted intact with all of its endings. After it has been entirely freed from the lip and all of its branches withdrawn from the tissues, then the inferior dental nerve can be removed from the canal; this is done in the following manner:

There is a spine forming part of the mental foramen at its distal side called the "lingula" which has to be chiseled off, otherwise it is impossible to introduce a probe or any instrument into the canal;

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after this is done, and it should be done under illumination, for it is easy to sever the nerve with the chisel as it makes its exit; if the nerve is severed no harm is done, but it is more satisfactory to remove it intact.

After the overhanging shelf has been chiseled off, a wire 1 mm. in diameter, having a certain amount of spring and barbed so that the barbs are directed towards the handle, is introduced into the canal and pushed upward until the point can be felt at the upper opening on the inner surface of the ascending ramus of the jaw as the nerve is given off from the inferior maxillary nerve; the handle is then slowly turned around its own axis, care being exercised that the instrument is not twisted, otherwise the wire will be so twisted as to break off in the canal; it is important that the instrument be turned slowly so that the barbed end will engage the nerve. After the instrument has been rotated eight or ten times very slowly upon its own axis, the sensation of the nerve tearing away is readily felt when the whole nerve is withdrawn from the canal more or less intact. The nerve canal can then be felt empty of its contents when the probe is introduced.

A point of importance also is to avulse the incisor branch of the nerve which is a continuation of the inferior dental nerve that passes to the two incisor teeth; this should also be withdrawn by a barbed-pointed instrument, the same as the one just described. Alcohol may be injected into the canal, but the results are practically the same if the nerve has been thoroughly removed.

Note: It was Dr. M. H. Woolsey who first called my attention to the method of removing the nerve from the canal by means of the barbed wire.

Discussion.

Dr. Hyman: Do I understand that with ordinary resection the pain does not cease?

Dr. Levison: It does but it recurs after a year or so practically as after alcohol injections. I operated in one case and despite the fact that the inferior dental nerve had been removed, the pain did not disappear until the filaments of the nerve in the lip were avulsed.

In answer to Dr. Wilbur I want to say that the first operation of this kind that I performed was prior to the time when alcohol injections had been introduced; at that time the usual procedure in tic douloureaux was to trephine at the angle of the jaw and extract the nerve from its canal. As far as immediate effect was concerned, this was satisfactory and the patient remained well for a time. I have had several experiences of this kind. I advocate operation in a certain class of cases, for example:

The woman whose nerve I am here demonstrating was treated by numerous alcoholic injections given by competent people. She had reached the point where she felt that something else had to be done; her attitude was characteristic of those suffering from inveterate neuralgia of the inferior dental nerve; she could not open her mouth, neither could she speak nor eat on account of the severe pain that these motions produced. The area on the chin opposite the exit of the mental nerve was red and she held her handkerchief to this point constantly. She was ready to submit to anything but further alcohol injections. It is for these patients that operation is advocated; it is not associated with any mutilation and is really much easier to perform than to describe.

SOME FACTORS IN HABITUAL CONSTIPATION.*

By RAYMOND RUSS, M. D., San Francisco.

The center of surgical discussion shifts from time to time. The brain, the neck, the thorax, occupy in turn the circle of the spotlight, which may be switched at any moment to some other portion of the stage of endeavor. Surgery, constantly trying to increase its scope, has fads and fancies. The opening of a new field is always followed by a stage of over-enthusiasm and sometimes reckless and ill-considered operating. Concomitant causes are lost sight of in the presence of what is thought to be a newly evolved principle, so desirous are we of reducing our asset of painful experience to the proportions of absolute, scientific fact.

Until recent years our conception of the large intestine was that of a receptacle in which waste products were stored before their evacuation. The experiments of Cannon and Barclay Smith established a definite function for the first portion of this tube; with this focusing of attention came a discussion of habitual constipation which primarily concerns it. The work of Wilms, Lane, Jackson, Fischler and others is so well known that we will not comment on it; suffice to say that besides ptosis, various adhesions and membranes have been found throughout the length of this large tube and that the view is growing with many men to regard certain forms of habitual constipation as purely mechanical, and this class believe that in many instances direct interference offers the only remedy.

Bismuth meals and X-ray pictures of the large intestines are becoming common but many and most serious errors have resulted from their interpretation. While the surgeon may profit by his mistakes, the patient does not. Too frequently he pays the penalty of ill-timed enthusiasm. The X-ray is teaching us that we must abandon our mental picture of the large bowel in health; that there is a difference in location between the standing and the lying positions; that the colon may be entirely within the pelvis of a woman in normal health; that the length of the ascending colon varies within wide limits and that the cecum is most variable in size and position. These are some of the things that a careful study of X-ray plates is showing but the strange part of it is that we already possessed this anatomical knowledge.

The wonderful strides that surgery has made are so impressive that we are prone to forget its shortcomings. We have long believed that the most serious blow the subject ever received was when it was divorced from anatomy. Few surgeons of

* Read before the San Francisco Polyclinic Society.